CLAIMS

1. A MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.

2. The MUC1 chimeric protein of claim 1, wherein said MUC1-EC polypeptide is selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, SEQ ID NO: 23, SEQ ID NO: 25, SEQ ID NO: 27, SEQ ID NO: 29 and SEQ ID NO: 31.

3. The MUC1 chimeric protein of claim 1, wherein said MUC1-EC polypeptide binds dermcidin, Y-P30 peptide, or PLU-1.

4. The MUC1 chimeric protein of claim 1, wherein said human immunoglobulin FC polypeptide is a human IgG FC polypeptide.

5. The MUC1 chimeric protein of claim 4, wherein said IgG FC polypeptide is a IgG1 or IgG2 FC polypeptide.

6. The MUC1 chimeric protein of claim 4, further comprising a second MUC1 chimeric protein comprising a human immunoglobulin FC polypeptide, wherein said MUC1 chimeric protein of claim 4 and said second MUC1 chimeric protein form a dimer by means of disulfide bridge formation between the hinge region of the human immunoglobulin FC polypeptide of said MUC1 chimeric protein of claim 4 and the hinge region of the human immunoglobulin FC polypeptide of said second MUC1 chimeric protein.

7. The MUC1 chimeric protein dimer of claim 6, wherein said MUC1 chimeric protein dimer comprises two different MUC1-EC polypeptides.

8. The MUC1 chimeric protein of claim 1, wherein said MUC1 chimeric protein is a fusion protein.

9. A pharmaceutical composition comprising the MUC1 chimeric protein of claim 1 and a pharmaceutically acceptable carrier.

10. A method of inhibiting the proliferation of a MUC1-expressing cancer cell comprising contacting said MUC1-expressing cancer cell with an effective amount of a MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.

11. A method of killing a MUC1-expressing cancer cell comprising contacting said MUC1-expressing cancer cell with an effective amount of a MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.

12. The method of claim 11, further comprising contacting said MUC1-expressing cancer cell with an effective amount of a chemotherapeutic agent.

13. The method of claim 11, further comprising exposing said MUC1-expressing cancer cell with an effective amount of ionizing radiation.

14. A method of treating cancer in a patient comprising administering an effective amount of MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.